

In the Specification:

Please **replace** the paragraph at **page 1, lines 6 to 7**, with a replacement paragraph amended as follows:

This application is a Divisional of U.S. Application 10/346,340, filed January 16, ~~2003~~ 2003, now U.S. Patent 6,723,770 issued April 20, 2004.

Please **replace** the paragraph at **page 24, line 17 to page 25, line 3**, with a replacement paragraph amended as follows:

No cracking occurred on the surface of the laminate in Example 1. For comparison, only the coating solution 3 was ~~applied~~ applied on a quartz glass substrate to form a film of 10  $\mu\text{m}$  in thickness after drying. Cracking occurred on the surface of this comparative film. In the laminate in Example 1, there is a concentration gradation wherein the concentration of Si element is increased towards the surface, and this concentration gradation would relieve the stress upon formation of the laminate, thus preventing cracking on the surface. Accordingly, the adhesion to the substrate would also be improved by giving such concentration gradation to the laminate.

Please **replace** the paragraph at **page 25, line 17 to page 26, line 6**, with a replacement paragraph amended as follows:

As shown in Fig. 6, this laminate was used as a ~~grated~~ graded index-type planar optical waveguide. Referring to Fig. 6, laminate 4 is arranged on a quartz glass

substrate 3. Laminate 4 is the laminate in Example 2. Laser light 5 was introduced into the end surface of a layer of low refractive index in laminate 4 near to the substrate 3. In the vicinity of the end surface of laminate 4 at the side opposite to the end surface where laser light 5 was introduced, an optical system 6 was arranged, and screen 7 was arranged apart by a predetermined distance from the optical system 6. The laser light 5 introduced into one end surface of laminate 4 was passed through the optical system 6 and projected on the screen 7. A sharp spot of light was projected on the screen 7, indicating that the laminate in Example 2 can function as a planar optical waveguide.

Please **replace** the paragraph at **page 26, lines 10 to 25**, with a replacement paragraph amended as follows:

Fig. 7 is a schematic sectional drawing of the laminate in the second aspect of the present invention. Referring to Fig. 7, laminate 9 was formed by laminating the organic-inorganic composite material films 9a, 9b, 9c, 9d, 9e, 9f, and 9g on substrate 8. Among films 9a to 9g, film 9d had the highest content of the metal element. The content of the metal element of the metal alkoxide is increased in the order of films 9a, 9b, 9c and 9d, but the content of the metal element is decreased in the order of films 9d, 9e, 9f and 9g. Accordingly, the laminate 9 has a concentration gradation wherein the metal ~~element of~~ element of the metal alkoxide is first increased and then

decreased. As described above, the refractive index is decreased as the content of Si is increased, so a graded structure wherein the refractive index is first decreased and then increased in the direction of thickness is formed in the laminate 9.

**[RESPONSE CONTINUES ON NEXT PAGE]**